b.) Remarks

Claim 1 has been amended in order to more specifically recite the subject matter of the present invention. Claims 7 and 8 have been cancelled and claim 25 is rewritten in independent form. Claims 6, 9-19, 21-28, 38, 39, 41, 43, 44, 47-50, 52, 61, 78-86 and 88-91 are amended to maintain their dependency and/or for better idiomatic usage. The subject matter of the amendment may be found in the specification as filed, *inter alia*, at page 24, lines 19-23. Accordingly, no new matter has been added.

Claims 1, 6-19, 21-28, 38, 39, 41, 43 and 44 stand rejected under 35 U.S.C. §102(b) as being anticipated by each of Klug, Jutterman, Shi, Young and Makino.

Initially, in response, Makino (March, 1999) is no longer 102(b) prior art herein because the present application is a divisional of PCT/JP00/01148 filed February 28, 2000. Enclosed in this regard is a suitable Declaration clarifying such status. Accordingly, this application is entitled to the 102(e) date of the PCT application and the statutory basis of this rejection is removed.

As discussed in the Office Action, the Examiner maintained the rejection over Shi and Makino because of the claim language "can differentiate". Frankly speaking, Applicants are unclear why this language is objectionable but, solely in order to reduce the issues, the noted language has been amended above to read --capable of differentiating-- in conformity with the Examiner's kind suggestion at page 5, lines 15-17 of the Office Action. Accordingly, the rejection over Shi is overcome (of course, the rejection of Makino is removed on this basis as well).

This leaves the rejection over Klug, Jutterman and Young (1999). The Examiner's basis of rejection is set forth at page 5 which states that absent evidence of a claimed characteristic or difference not found in the prior art, the rejections are maintained. This rejection is respectfully traversed by providing the requested evidence herein.

The Examiner relies on Klug and Jutterman as teaching cells capable of differentiating into various tissues, including cardiomyocytes. However, the cells in Klug and Jutterman are embryonic stem (ES) cells which are quite different from "adult stem cells" as now recited in all the pending claims. The differences among these cells is well-understood by the skilled artisan, and recounted below to complete the record and for better clarity.

That is, as well-understood by those of ordinary skill, embryonic stem cells and adult stem cells differ in kind.[1] For instance, embryonic stem cells are pluripotent and can become all cell types found in the body. In contrast, adult stem cells have limited plasticity and are generally limited to differentiating only into different cell types of their tissue of origin. Accordingly, a given adult stem cell can specialize into various, but not all cell and tissue types. Thus, the capability of adult stem cells to give rise to different specialized cell types is far more limited than that of embryonic stem cells.[2] Accordingly, the ES cell is a pluripotent stem cell, and is distinguished from Applicants' adult stem cell is only a multipotent stem cell with limited differentiation ability. Klug and Jutterman

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[1] See, e.g., http://stemcells.nih.gov/info/basics/basics5.asp, copy attached as reference B to the accompanying Information Disclosure Statement.

[2] See, e.g., http://stemcells.nih.gov/info/scireport/execSum.asp, copy attached as reference A to the accompanying Information Disclosure Statement.

therefore do not anticipate the subject matter of the pending claims, which relate to adult stem cells.

This leaves rejection over Young (1999). As noted, the Examiner's basis of rejection is again that absent evidence of a claimed characteristic or difference not found in the prior art, the rejection is maintained.

According to the above amendments, the presently claimed invention relates to an adult stem cell which is CD117-positive and CD140-positive. As noted by the Examiner, Young describes that the adult stem cells are negative for CD3, CD5, CD7, CCD11b, CD14, CD15, CD16, CD19, CD25, CD45 and CD65 markers, but neither describes nor suggests CD117.

However, Young later describes[3] that the adult stem cells of Young (1999) were analyzed and were found to be CD117-negative (see Abstract at page 51, page 52, right column, lines 3-7 and Table 2 at page 55).[4]

Accordingly, since the adult stem cells of Young (1991) are CD117-negative, Young (1999) does not anticipate Applicants' adult stem cells which are CD117-positive. Therefore, this rejection too is overcome and should be withdrawn.

In view of the above amendments and remarks, Applicants submit that all of the Examiner's concerns are now overcome and the claims are now in allowable condition. Accordingly, reconsideration and allowance of this application is earnestly solicited.

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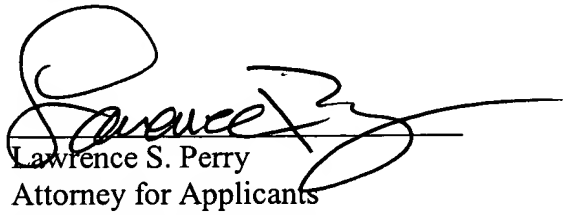
[3] *The Anatomical Records*, 264, 51-62 (2001), copy attached as reference C to the accompanying Information Disclosure Statement.

[4] Young, et al., (*Anat. Rec. A Discov. Mol. Cell Evol. Biol.*, Vol. 277, No. 1 (2004), 178-203 (copy attached as reference D to the accompanying Information Disclosure Statement) is cited only as showing the adult stem cells obtained from skeletal muscle differentiate into cardiomyocytes.

Claims 1, 6, 9-19, 21-28, 38, 39, 41, 43, 44, 47-63 and 78-91 remain presented for continued prosecution.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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